

Complex Compounds of Bivalent
Platinum With Glycocoll

S/078/60/005/009/022/040/XX
B017/B058

ASSOCIATION: Dnepropetrovskiy khimiko - tekhnologicheskii institut
im. F. E. Dzerzhinskogo
(Dnepropetrovsk Institute of Chemical Technology imeni
F. E. Dzerzhinskiy)

SUBMITTED: June 16, 1959

✓

Card 3/3

VOLSHTEYN, L.M.; MOGILEVKINA, M.F.

Complex compounds of divalent platinum with 1,7-
aminoanthic acid. Zhur.neorg.khim. 5 no.7:1445-1448
J1 '60. (MIRA 13:7)

1. Dnepropetrovskiy khimiko-tekhnologicheskii institut.
(Platinum compounds) (Hortanoic acid)

VOLSHTEYN, L.M.

Different course of the Jorgensen cleavage of noncyclic
compounds of divalent platinum with - and -amino acids.
Zhur.neorg.khim. 5 no.7:1449-1453 J1 '60.
(MIRA 13:7)

1. Dnepropetrovskiy khimiko-tekhnologicheskoy institut im.
F.M.Dzerzhinskogo.
(Platinum compounds) (Amino acids)

VOLSHTEYN, L.M.; VOLODINA, I.O.

New data on complexes of divalent platinum with glyccol. Zhur.
neorg.khim. 5 no.1:35-38 Ja '60. (MIRA 13:5)

1. Dnepropetrovskiy khimiko-tehnologicheskoy institut in.
F.E.Dzerzhinskogo.
(Platinum compounds) (Olycine)

5.2620

AUTHORS:

Volshiteyn, L. M., Volodina, I. O.

68987

S/020/60/131/02/026/071
B011/B005

TITLE:

The Cis-isomer of the Inner Complex Salt of Bivalent Platinum With α -Alanine

PERIODICAL:

Doklady Akademii nauk SSSR, 1960, Vol 131, Nr 2, pp 309-311 (USSR)

ABSTRACT:

The compound H_2PtCl_4 (ClH = glyccocoll), on heating with water, is nearly quantitatively transformed into the cis-isomer of the inner complex salt (4) (Ref 3). In contrast to glyccocoll, this does not apply to AnH (alanine) in which case only the trans-isomer of $[PtAn_2]$ is formed (Ref 4). Among the 3 simplest members of the homologous series of α -amino acids only the cis-isomer of the inner complex salt of AnH remained unknown. Now the authors tried its synthesis. When acid is added to the $K_2[PtAn_4]$ solution, H_2PtAn_4 does not precipitate. This compound must, however, be present in the solution, and can be transformed into cis- $[PtAn_2]$ on heating. The cooling of the solution produced an abundant white precipitate. It was pure cis- $[PtAn_2]$ with a 30% yield. Its properties differ considerably from those of trans- $[PtAn_2]$. The solubility of the cis-isomer in water is about 14 times higher than that of the trans-isomer. On addition of concentrated HCl to the

Card 1/3

The Cis-isomer of the Inner Complex Salt of
Bivalent Platinum With α -Alanine

68987

S/020/60/131/02/026/071
B011/B005

cis-isomer the original precipitate disappears at once and completely. A bright yellow solution forms. On the other hand, the trans-isomer with HCl becomes slightly yellowish but does not pass over into the solution. The cis-dichloride forms with an 80% yield. The alanine rings in the inner complex salts are ruptured by the action of HCl. Both dichlorides (trans- and cis-) are dibasic acids. The cis-dichloride is much better soluble in water than the trans-isomer. Both are poorly soluble in concentrated HCl. The trans-dichloride is better soluble in ether. Both isomers behave differently to thiourea and other reagents. Thus, both isomers $[PtA_2]$ (AH - monobasic amino acids) were obtained for all three simplest α -amino acids. The compound H_2PtA_4 from which the authors have probably produced the cis-isomer was also obtained in a small quantity, and will be described later on. A. A. Grinberg and B. V. Ptitsyn are mentioned. There are 6 Soviet references.

ASSOCIATION: Dnepropetrovskiy khimiko-tehnologicheskii institut im. F. E.
Dzerzhinskogo (Dnepropetrovsk Institute of Chemical Technology
imeni F. E. Dzerzhinskiy)

Card 2/3

The Cis-isomer of the Inner Complex Salt of
Bivalent Platinum With α -Alanine

68987
S/020/60/131/02/026/071
B011/B005

PRESENTED: November 21, 1959, by A. A. Grinberg, Academician

SUBMITTED: November 19, 1959

Card 3/3

5(2)

AUTHORS:

Volshteyn, L. M., Anokhova, L. S.

SOV/78-4-2-13/40

TITLE:

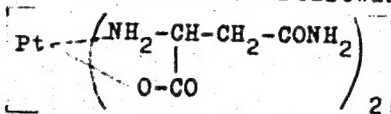
The Inner Complex Salt of Bivalent Platinum With Asparagine
(Vnutrikompleksnaya sol' dvukhvalentnoy platiny s asparaginom)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 2,
pp 325-329 (USSR)

ABSTRACT:

The interaction of K_2PtCl_4 with an asparagine excess was investigated in an acid and an alkaline medium. In an alkaline medium only the complex of divalent platinum with asparagine is formed which has the following composition:



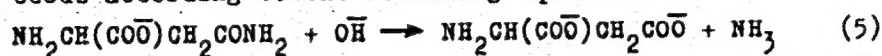
This salt is a genuine inner complex salt with cis-configuration. On an interaction of $K_2[PtCl_4]$ with asparagine in an acid medium a mixture of inner complex salts is formed: $[Pt(aA)_2]$, $[Pt(aA)(AspH)]$, and $[Pt(AspH)_2]$. In these formulas asparagine is expressed as aAH, aspartic acid as $AspH_2$, the

Card 1/3

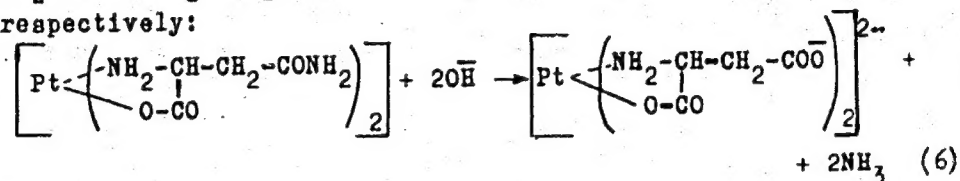
SOV/78-4-2-13/40

The Inner Complex Salt of Bivalent Platinum With Asparagine

anions of these compounds as aa^- , $AspH^-$, and Asp^{2-} . Asparagine bound in the platinum complex saponifies faster than free asparagine. The saponification in the alkaline medium proceeds according to the following equations:



respectively:



The properties of the inner complex salt $[Pt(aa)_2]$ are described in detail. The electric conductivity in aqueous solutions was determined and the results showed that the complex is undissociated at low temperatures. On heating, slight electric conductivity of the solution occurs which is probably caused by the saponification of asparagine. A dichloride of the composition $[PtCl_2(aAH)_2]$ is formed by the

Card 2/3

SOV/78-4-2-13/40

The Inner Complex Salt of Bivalent Platinum With Asparagine

effect of hydrochloric acid. The salt $[Pt(aa)_2]$ has cis-configuration. In a HCl-medium the complex reacts with thiourea while $[Pt(thio)_4]Cl_2$ is formed; thus the cis-configuration is proved. There are 11 Soviet references.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskii institut im. F. E. Dzerzhinskogo (Dnepropetrovsk Chemo-technological Institute imeni F. E. Dzerzhinskiy)

SUBMITTED: November 3, 1957

Card 3/3

5(2)

AUTHORS:

Volshiteyn, L. M., Motyagina, G. G.

SOV/78-4-9-11/44

TITLE:

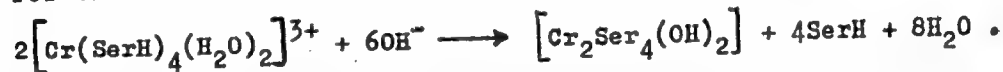
The Inner-complex Salts of Trivalent Chromium With Serine and Asparagine

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 9, pp 1995-1999 (USSR)

ABSTRACT:

Hitherto complex salts of Cr^{III} with serine were unknown. At $n > 3$ (n = ratio of serine in moles to Cr in gram-atoms), CrCl_3 was completely converted to complexes of the type $[\text{Cr}(\text{SerH})_n(\text{H}_2\text{O})_{6-n}]^{3+}$ by boiling with serine. These complexes were not decomposed by ammonia. A purple precipitate of the composition $[\text{Cr}_2\text{Ser}_4(\text{OH})_2]$ gradually formed on addition of KOH. For this reaction the following equation was assumed:



Card 1/3

As this compound is not an electrolyte it does not represent a chromium salt, the structure of the complex being similar to the

The Inner-complex Salts of Trivalent Chromium With
Serine and Asparagine

SOV/78-4-9-11/44

equivalent compounds of chromium with glycine and alanine. In preparing this compound a too high alkali concentration is to be avoided, as serine decomposes at a $\text{pH} > 5$ $[\text{Cr}_2\text{Ser}_4(\text{OH})_2]$ on boiling with dilute HCl yielded $[\text{CrSer}_2\text{H}_2\text{OCl}]$. The inner-complex salt of asparagine $[\text{CrAsp}_3]$ had already been prepared by L. A. Chugayev and Ye. Serbin (Ref 1). The authors obtained the same compound by KOH -treatment of non-cyclic complexes of the type $[\text{Cr}(\text{AspH})_n(\text{H}_2\text{O})_{6-n}\text{Cl}_3]$, which had been prepared by boiling chromium trichloride solution with asparagine. The authors were able to confirm the formula given by Chugayev. The complex salt

Card 2/3

The Inner-complex Salts of Trivalent Chromium With
Serine and Asparagine

SOV/78-4-9-11/44

of asparagine could be recrystallized without suffering change,
which shows that it is more stable than the corresponding
compound of glycine and alanine. There are 13 references,
8 of which are Soviet.

ASSOCIATION: Dnepropetrovskiy khimiko-tehnologicheskii institut im. F. E.
Dzerzhinskogo (Dnepropetrovsk Institute of Chemical Technology
imeni F. E. Dzerzhinskiy)

SUBMITTED: June 7, 1958

Card 3/3

5 (2)

AUTHORS:

Volshteyn, L. M., Anokhova, L. S.

SOV/78-4-8-6/43

TITLE:

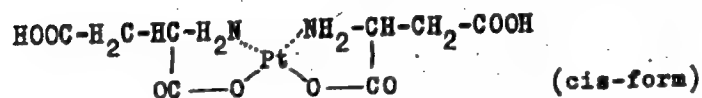
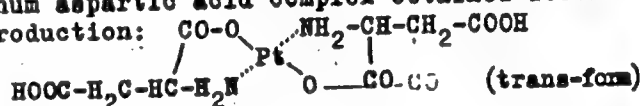
Isomeric Inner Complex Salts of Divalent Platinum With Aspartic Acid (Izomernyye vnutrikompleksnyye soli dvukhvalentnoy platiny s asparaginovoy kislotoy)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 8,
pp 1734 - 1740 (USSR)

ABSTRACT:

A. A. Grinberg and N. N. Kats described the complex compounds of divalent platinum with dibasic amino acids (Ref 1) and its inner complex salts with glutamic and aspartic acid. In an earlier paper (Ref 2) the authors determined the cis- or trans-structure of the platinum aspartic acid complex obtained according to the method of production:

$$\text{CO-O-} \underset{\text{Pt}}{\text{NH}_2} \text{-CH-CH}_2\text{-COOH}$$


Card 1/2

In the present paper the production of the two isomers is de-

**Isomeric Inner Complex Salts of Divalent Platinum
With Aspartic Acid**

SOV/78-4-8-6/43

scribed (trans-form from K_2PtCl_4 and aspartic acid, cis-form by saponification of the platinum-aspartic complex). The trans-configuration was proved by the reaction with thiourea (yellow precipitate), by conversion into the compound $trans-[Pt(NH_3)_2Cl_2]$ and by reaction with ethylene diamine. The cis-configuration was determined by the reaction with thiourea (white precipitate). Furthermore, the behaviour of the two isomers towards Ba^{2+} and Ca^{2+} , HCl , NH_3 and ethylene diamine was described. The isomers differ from one another by the fact that the trans-isomer forms insoluble compounds (Table 1). There are 1 table and 5 Soviet references.

ASSOCIATION: Dnepropetrovskiy khimiko-tehnologicheskii institut im.
F. E. Dzerzhinskogo (Dnepropetrovsk Institute of Chemical
Technology imeni F. E. Dzerzhinskiy)

SUBMITTED: July 11, 1958
Card 2/2

VOLSHTEYN, L.M.; ANOKHOVA, L.S.

Inner complex salt of divalent platinum with asparagine. Zhur.neorg.
(MIRA 12:3)
khim. 4 no.2:325-329 1959.

1. Dnepropetrovskiy khimiko-tekhnologicheskoy institut imeni F.E.
Dzerzhinskogo.
(Platinum compounds) (Asparagine)

Distr: 4E4, 4E2c

VOISHTEYN, L.M.; VELIKANOVA, N.S.

Cis and trans isomers of bivalent platinum intercomplex salt with
 α -aminobutyric acid. Zhur. neorg. khim. 2 10:2383-2389 0 '57.
(MIRA 11:3)

1. Dneprovskiy khimiko-tehnologicheskoy institut im. F.E.
Dzerzhinskogo.

(Platinum) (Isomers) (Butyric acid)

VOLSHTYN, L.M.; SIUTSKAYA, M.M.

Some of the imidosulfamide salts. Part 2. Zhur. ob. khim. 27 no.11:
2913-2916 M '57. (MIRA 11:3)

1. Dnepropetrovskiy metallurgicheskii institut.
(Sulfamide) (Nickel salts) (Zinc salts)

AUTHORS: Volshteyn, L. K., Slutskaya, M. K. 79-11-1/56

TITLE: On Some Salts of Imidosulphamide.II. (O nekotorykh solyakh imidosul'famida.II).

PERIODICAL: Zhurnal Obshchey Khimii, 1957, Vol. 27, Nr 11, pp. 2913-2916 (USSR)

ABSTRACT: In connection with the barium-, silver- and copper salts of imidosulphamide $(\text{NH}_2\text{SO}_2)_2\text{NH}(\text{HIm})$ earlier produced by the authors the same authors synthesized and investigated several others of its salts. They found that the behavior of the acid residue $(\text{NH}_2\text{SO}_2)_2\text{N}^-(\text{Im})$ in the salts is essentially dependent on the nature of the cation connected with it. The nickel- and zinc-salts are described here, with some supplementary data on the copper salt. The nickel salt was obtained by the authors from BaIm_2 and HISO_4 , in equimolecular quantities. The calculated volume of the titrated HISO_4 solution was put to the BaIm_2 dissolved in water and completely analyzed, then filtered from BaSO_4 -precipitated and the filtrate evaporated in a vacuum at a room temperature of 60 - 70°C. For producing the zinc salt the authors mixed the concentrated solutions of the BaIm_2 - and ZnSO_4 - salts in equimolecular quantities and obtained the final product in a similar manner as above with the nickel salt (details in the experimental part). Thus the imidosulphamidate of nickel (the dehydrated salt $\text{Ni}[\text{N}(\text{SO}_2\text{NH}_2)]_2$ and

Card 1/2

On Some Salts of Imidosulphamide II. ^{79-11-1/56}
its dihydrate) and the imidosulphamidate $Zn[N(SO_2NH_2)_2]_2 \cdot 2H_2O$.
were synthesized. It became evident, that after a longer time
of shaking with alcohol the imidosulphamidate of zinc to sulpha-
te. The crystallohydrate of nickel sulphamidate, however, is only
dehydrated. There are 2 Slavic references.

ASSOCIATION: Dnepropetrovsk Metallurgical Institute (Dnepropetrovskiy metall-
urgicheskiy institut).

SUBMITTED: October 6, 1956

AVAILABLE: Library of Congress.

1. Imidosulphamide salts-Chemical analysis
2. Imidosulphamide salts-Synthesis

Card 2/2

VOL'SHTEYN, L.M.; MOGILEVKINA, M.F.

Isomeric compounds of divalent platinum with ϵ -aminocaproic
acid. Zhur.neorg.khim. 2 no.6:1275-1280 Je '57. (MIRA 10:10)

1. Dnepropetrovskiy khimiko-tehnologicheskiy institut im. F.E.
Dzerzhinskogo.

(Platinum organic compounds)
(Hexanoic acid)

26161
S/078/60/005/007/020/043/XX
B004/B060

5 2130 1242
AUTHORS: Volshteyn, L. M., Mogilevkina, M. F.

TITLE: Complex Compounds of Bivalent Platinum With 1,7-Amino-
enanthio Acid

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 7,
pp. 1445 - 1448

TEXT: The authors had previously studied the complex compounds of Pt^{II} with 1,3-, 1,4-, and 1,6-amino acids. The present article deals with complex compounds of Pt^{II} with 1,7-amino-enanthic acid. The authors attempted to obtain $trans-[PtE_2(NH_3)_2]$ ($E = NH_2(CH_2)_6COO-$) in order to study the Jørgensen splitting on it. The reaction of potassium chloroplatinite in alkaline medium with all α -amino acids (A) took place according to equation $K_2PtCl_4 + 4AH + 4KOH = K_2PtA_4 + 4H_2O + 4KCl$. With amino-enanthic acid, the authors obtained K_2PtE_4 , from whose solution $[Pt(EH)_4]Cl_2$ was precipitated by means of concentrated HCl. A long ebullition with HCl

Card 1/2

Complex Compounds of Bivalent Platinum With
1,7-Aminoanthic Acid

⁸⁶¹⁶¹
S/078/60/005/007/020/043/XX
B004/B060

yielded trans-[Pt(NH₂(CH₂)₆CO₂H)₂Cl₂], which was separated from the admixed cis-compound by means of NH₃, and trans-[Pt(NH₂(CH₂)₆CO₂·2(NH₃)₂] was formed in the process. The latter compound is difficultly soluble in water, and insoluble in alcohol and ether. It was subjected to the Jörgensen splitting by way of boiling with HCl, and the resulting products were trans-[Pt(NH₃)₂Cl₂] and trans-[Pt(EH)₂Cl₂]. While the examined 1,2-amino acids were found to yield up to 90% trans-[Pt(NH₃)₂Cl₂], only 22% of it was found for 1,6-aminocaproic acid, and only 20% for 1,7-aminoanthic acid. There are 9 Soviet references.

ASSOCIATION: Dnepropetrovskiy khimiko-tekhnologicheskii institut
(Dnepropetrovsk Institute of Chemical Technology)

SUBMITTED: February 7, 1959

Card 2/2

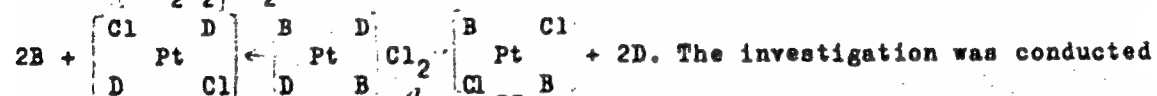
S/078/60/005/007/021/043/XX
B004/B060

AUTHOR: Volashteyn, L. M.

TITLE: Different Courses of the Jørgensen Splitting of Acyclic Compounds of Bivalent Platinum With α - and β -Amino Acids

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 7, pp. 1449 - 1453

TEXT: The author reports on his study of the Jørgensen splitting of trans- $\text{PtB}_2\text{D}_2\text{Cl}_2$ which takes place according to the following scheme:



for the complex compounds of Pt^{II} with the following amino acids (A - ion of amino acid, AH its molecule): glycocoll (G1H); α -alanine (AnH); α -aminobutyric acid (BH); α -amino isocaproic acid (leucine) (LH); β -aminopropionic acid (β -alanine) (β H); γ -aminobutyric acid (γ H); ϵ -amino caproic acid (ϵ H), and 1,7-aminoenanthic acid (EH). The resulting

Card 1/4

Different Courses of the Jørgensen Splitting of Acyclic Compounds of Bivalent Platinum With α - and ω -Amino Acids S/078/60/005/007/021/043/XX B004/B060

$\begin{bmatrix} \text{AH} & \text{NH}_3 \\ \text{Pt} & \\ \text{NH}_3 & \text{AH} \end{bmatrix} \text{Cl}_2$ were titrated, and the difficultly soluble diammine $\begin{bmatrix} \text{AH} & \text{Cl} \\ \text{Pt} & \\ \text{Cl} & \text{AH} \end{bmatrix}$ of the dichloride $\begin{bmatrix} \text{AH} & \text{Cl} \\ \text{Pt} & \\ \text{Cl} & \text{AH} \end{bmatrix}$ was filtered off. The following data were obtained for the Jørgensen splitting of compounds of the general composition $\begin{bmatrix} \text{AH} & \text{NH}_3 \\ \text{Pt} & \\ \text{NH}_3 & \text{AH} \end{bmatrix} \text{Cl}_2$:

Amino acid	Composition according to Jørgensen splitting		yield, %	
	diammine %	dichloride %	diammine	dichloride
1,2-G1H	100	0	92	0
1,2-AnH	100	0	90	0
1,2-BH	100	0	91	0
1,2-LH	100	0	88	0

Card 2/4

Different Courses of the Jørgensen Splitting
of Acyclic Compounds of Bivalent Platinum
With α - and ω -Amino Acids

S/078/60/005/007/021/043/XX
B004/B060

Continuation of the table

Amino acid	Composition according to Jørgensen splitting		yield, %	
	diammine %	dichloride %	diammine	dichloride
1,3-H	55	45	51	29
1,4-H	37	63	35	37
1,6-H	20	80	22	50
1,7-EH	16	84	18	50

The author infers from these data that the separation of the ω -AH group from platinum, as compared with the α -AH group, is made increasingly difficult with increasing distance between NH_2 group and COOH group, this being related to the decrease of acidity in the dipolar $\text{NH}_3^+\text{RCO}_2^-$ ion. The splitting brought about by means of KBr instead of HCl is briefly described, and it is stated that $\text{PtBr}_2(\text{NH}_3)_2$ was obtained from BH, βH , γH , and ϵH in yields of 89, 44, 34, and 17%. Both trans- and cis-forms were obtained from α -amino acids on the splitting of cis-compounds

Card 3/4

Different Courses of the Jørgensen Splitting
of Acyclic Compounds of Bivalent Platinum
With α - and ω -Amino Acids

S/078/60/005/007/021/043/XX
B004/B060

$\begin{bmatrix} \text{NH}_3 & \text{AH} \\ \text{Pt} & \\ \text{NH}_3 & \text{AH} \end{bmatrix} \text{Cl}_2$, but only trans-compounds with $\neq \text{H}$. The experimental part of

the investigation was carried out by N. S. Velikanova, M. F. Mogilevkina,
and I. O. Volodina. There are 1 table and 19 references: 13 Soviet, 2 US,
1 British, 2 French, and 1 Japanese. ✓

ASSOCIATION: Dnepropetrovskiy khimiko-tehnologicheskii institut im.
F. E. D-erzhinskogo (Dnepropetrovsk Institute of Chemical
Technology imeni F. E. Dzerzhinskiy)

SUBMITTED: March 16, 1959

Card 4/4

VOLSHTEYN, L.M.; MOTYAGINA, G.G.

Multistage conversion of diglycyldiglycylplatinum into an inner complex salt. Zhur. neorg. khim. 5 no.8:1730-1734 Ag '60.
(MIRA 13:9)

1. Dnepropetrovskiy khimiko-tekhnologicheskii institut im.
B.E. Dzerzhinskogo.

(Platinum compounds)

VOLSHTEYN, L.M.; VOLODINA, I.O.

Complex compounds of divalent platinum with glyccoll. Zhur.
neorg.khim. 5 no.9:1948-1953 8 '60. (MIRA 13:11)

1. Dnepropetrovskiy khimiko-tekhnologicheskii institut imeni P.E.
Dzerzhinskogo.

(Platinum compounds) (Glycine)

VOISICKY, Z.

VOISICKY, Z. Washing of lignite in the cyclone. p. 377.

Vol. 5, No. 111 Nov. 1955

UHLI

TECHNOLOGY

Praha, Czechoslovakia

So: East European Accessions, Vol. 5, No. 5, May 1956

105. HEAVY MEDIA PREPARATION OF BROWN COALS IN THE HYDROCYCLONE.
Volotsky, Z. (Ural Coal League), 1955, vol. 3, (11), 377-382, abstr. in
Udarnik, 18 Feb. 1956, vol. 92, 245).

sub 1

1ST AND 2ND ORDER										1ST AND 2ND ORDER									
PROCESSING AND PROPERTY INDEX																			
BC										B-1-2									
<p>Change in properties of agar-agar under the influence of freezing. P. M. Pavlov and R. Volina. Zhurnal. Khim. J., 1965, 10, 465-468.—Part of the H₂O is evaporated from the gel during thawing after freezing at -107°; the mineral and N contents of the residual gel are < and their relative strength is > than of the original gel. R. T.</p>																			
<p>ASB-514 METALLURGICAL LITERATURE CLASSIFICATION</p>																			
140000 01										011121 ONE CHV 151									
101-50 MET CHV 151										011121 ONE CHV 151									
140000 01										011121 ONE CHV 151									

15

EXPERIMENTS WITH NITROGEN FERTILIZERS. A. N. VIL'KAYA, *Udebrene i Urushai (Fertilizers and Yields) 1929, No. 4, 221-6.*—The results of 3 years' expts. on a sandy loam and heavy loam soils with potatoes and oats are reported. As sources of N were used NaNO_3 , NH_4NO_3 , $\text{Ca}(\text{NO}_3)_2$, $(\text{NH}_4)_2\text{SO}_4$, NH_4HCO_3 , NH_4Cl , NH_4OH , CaCN_2 , and $\text{CO}(\text{NH}_2)_2$. On the soils studied NH_4 fertilizers were as good as nitrates, or better. NH_4NO_3 ranks first, followed by $(\text{NH}_4)_2\text{SO}_4$, as a close second, with NH_4Cl and NH_4OH . CO_2 being lower than NaNO_3 . $\text{Ca}(\text{NO}_3)_2$, CaCN_2 , and urea behaved in an erratic way. In some cases they were better, in some cases poorer, than NaNO_3 . J. S. Jovra

R. F. RYDER

ASB-168 METALLURGICAL LITERATURE CLASSIFICATION

L 7007-66

ACC NR: AP5026804

SOURCE CODE: UR/0286/65/000/017/0086/0086

INVENTOR: Kryukov, P. A.; Vol'skaya, A. G.; Sinkin, V. I.

ORG: none

TITLE: A device for measuring the electrical conductivity of solutions at ultrahigh pressures. Class 42, No. 174421 [announced by Institute of Inorganic Chemistry, Siberian Department AN SSSR (Institut neorganicheskoy khimii Sibirskogo otdeleniya AN SSSR)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 17, 1965, 86

TOPIC TAGS: electric conductivity, electric measuring instrument, high pressure

ABSTRACT: This Inventor's Certificate introduces a device for measuring the electrical conductivity of solutions at ultrahigh pressures. The instrument is a cell with two electrodes and a device for balancing the pressure inside and outside the cell. Accuracy is improved and measurement limits are increased by pressing the electrodes to the ends of the cell (which may be made of quartz) and making an opening in one of the electrodes to connect the interior of the cell with an auxiliary cavity with a diaphragm for pressure balance.

Card 1/3

UDC: 543.257.5

L 7007-66

ACC NR: AP5026804

SUB CODE: EM,EE/ SUBM DATE: 15Aug64/ ORIG REF: 000/ OTH REF: 000.

Card 2/3

L 7007-66

ACC NR: AP5026804

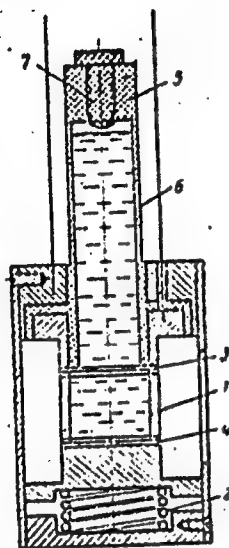


Fig. 1. 1 - quartz tube; 2 - spring; 3 and 4 - electrodes; 5 - combination component for pressure transmission; 6 - thin-walled cylinder which serves as a diaphragm; 7 - opening for filling the cell.

nw
Card 3/3

ZHBANKOVA, Inessa Ivanovna; SANUSKEVICH, A.V., kand. fil. nauk,
red.; VOL'SKAYA, G., red.

[Development in inorganic nature] O razvitii v neorgani-
cheskoi prirode. Minsk, Nauka, i tekhnika, 1964. 150 p.
(MIRA 18:1)

VOL'SKAYA, L., inzh.; PAVLOV, R., inzh.; SHCHERBAKOV, V., inzh.

Standard series of automatic equipment for refrigerating machines
[with summary in English]. Khol. tekhn. 35 no.4:39-44 JI-Ag '58.
(MIRA 11:10)

1. Tsentral'noye konstruktorskoye byuro kholodil'nogo mashinostroyeniya.
(Refrigeration and refrigerating machinery)

TSIRLIN, B., inshener; SENYAGIN, Yu.; VOL'SKAYA, L., inshener.

Testing temperature control valves. Khol.tekh.33 no.1:16-21
Ja-Mr '56. (MIRA 9:7)
(Refrigeration and refrigerating machinery--Testing)

VOLSKAYA, L.P.; SOLOV'YEVA, Yu.P.

Determining methyl alcohol in methanol fractions. Gidroliz. i lezhim.
prem. 9 no.6:18-19 '56. (MIRA 9:10)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut gidrolizov i sul'fitov-
spirtovy promyshlennosti.
(Wood alcohol) (Methanol)

1. CHALOV, N.V.; VOLSKAYA, L.P.

2. USSR (600)

4. Water - Purification

7. Purification of waste water containing phenols, aldehydes, and methyl alcohol.
Zhur. prikl, khim. 25 no.10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

BADYL'KES, I.S., prof., doktor tekhn.nauk; BUKHTER, Ye.Z., inzh.;
 VYINBERG, B.S., kand.tekhn.nauk; VOL'SKAYA, L.S., inzh.; GERSH,
 S.Ya., prof., doktor tekhn.nauk [deceased]; GUREVICH, Ye.S., inzh.;
 DANILOVA, G.N., kand.tekhn.nauk; YEFIMOVA, Ye.V., inzh.; IOFFE,
 D.M., kand.tekhn.nauk; KAN, K.D., kand.tekhn.nauk; LAVROVA, V.V.,
 inzh.; MEDOVAR, L.Ye., inzh.; ROZENFEL'D, L.M., prof., doktor tekhn.
 nauk; TKACHEV, A.G., prof., doktor tekhn.nauk; TSYRLIN, B.L.;
 SHUMELISHSKIY, M.O., inzh.; SHCHERBAKOV, V.S., inzh.; YAKOBSON, V.B.,
 kand.tekhn.nauk; GOOLIN, A.A., retsenzent; GUKHMAN, A.A., retsenzent;
 KARPOV, A.V., retsenzent; KURILEV, Ye.S., retsenzent; LUKITS, A.S.,
 retsenzent; SHISHKIN, P.N., retsenzent; SMETNOLIN, A.Ye., retsen-
 zent; SHEMSHEDINOV, G.A., retsenzent; PAVLOV, R.V., spetsred.;
 KOBULASHVILI, Sh.N., glavnyy red.; RYUTOV, D.G., zam.glavnogo red.;
 GOLOVKIN, N.A., red.; CHIZHOV, G.B., red.; NAZAROV, B.A., glavnyy
 red.izd-va; NIKOLAYEVA, N.G., red.; EYDINOVA, S.G., mladshiy red.;
 MEDRISH, D.M., tekhn.red.

[Refrigeration engineering; encyclopedic reference book in three
 volumes] Kholodil'naya tekhnika; entsiklopedicheskiy spravochnik
 v trekh knigakh. Glav.red. Sh.N.Kobulashvili i dr. Leningrad,
 Gostorgizdat. Vol.1. [Techniques of the production of artificial
 cold] Tekhnika proizvodstva iskusstvennogo kholoda. 1960. 544 p.

(MIRA 13:12)

(Refrigeration and refrigerating machinery)

→ ALEKSANDROV, S.V.---(continued) Card 2.

1. Vsesoyuznyy institut rasteniyevodstva (for Sechkarev, Lizgunova, Brezhnev, Gagenbush, Meshcherov, Filov, Tkachenko, Kazakova, Krasochkin, Levandovskaya, Shebalina, Syskova, Makasheva, Ivanov, Martynov, Girenko, Ivanova, Shilova). 2. Gribovskaya ovoshchnaya selektsionnaya opyt'naya stantsiya; chleny-korrespondenty Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Alpat'yev, Solov'yeva). 3. Deyatvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk im. V.I.Lenina (for Brezhnev).
(Vegetables--Varieties)

TSINZERLING, Ye.V.; VOL'SKAYA, O.B.

Determining the sign of rotation of the polarization plane in
quartz from the etching figures on the base. Kristallografiia
10 no.1:116-118 Ja-F '65. (MIRA 18:3)

1. Institut kristallografii AN SSSR.

VOZ'SKAYA, B. vrach-pedyyatar.

~~VOZ'SKAYA, B.~~
In order that mothers might work. Rab. 1 sial. no.9:16 S '55.
(Day nurseries) (MLBA 9:1)

VOL'SKAYA, R., detskiy vrach

Nutrition of and care for infants of eight and nine months.
Rab. i sial. 38 no. 3:19-20 Mr '62. (MIRA 15:2)
(INFANTS)

ACC NR: AT6000516 EWP(e)/EWT(m)/EWP(b) WW/GS/WH
SOURCE CODE: UR/0000/85/000/000/0428/0431

AUTHOR: Aslanova, M.S.; Vol'skaya, S.Z.

ORG: none

TITLE: Strength and structure of borate, cadmium, and lead glass fibers

SOURCE: Vsesoyuznoye soveshchaniye po stekloobraznomu sostoyaniyu. 4th, Leningrad, 1964. Stekloobraznoye sostoyaniye (Vitreous state); trudy soveshchaniya, Leningrad, Izd-vo Nauka, 1965, 428-431

TOPIC TAGS: glass fiber, glass property, borate glass, silicate glass

ABSTRACT: In order to determine the relationship between the strength and structure of glass fibers, continuous fibers in the systems $\text{CdO-B}_2\text{O}_3\text{-Al}_2\text{O}_3\text{-SiO}_2$, $\text{B}_2\text{O}_3\text{-CaO-Al}_2\text{O}_3\text{-SiO}_2$ and $\text{PbO-CdO-B}_2\text{O}_3\text{-Al}_2\text{O}_3\text{-SiO}_2$ were studied. Glass fibers containing up to 45.5 mole % CdO and PbO with a low SiO_2 content (16.3 mole %, called cadmium and lead fibers) and fibers with a high boric anhydride content (70 mole %, called borate fibers) were prepared. Cadmium fibers were found to be stronger than lead ones, owing to the higher strength of the Cd-O bond. Borate fibers had a strength similar to that of lead ones. Fibers made of alkali-free aluminum borosilicate glass had the highest strength (300 - 320 kg/mm²), whereas cadmium, borate, and lead fibers showed values of no more than 200 - 250 kg/mm². The effects of surrounding moisture on the extension of fibers, of chemical composition on the deformation of fibers in

Card 1/2

ACC NR: AT6000516

extension, of glass composition on the elastic modulus of fibers, and of thermal treatment on the strength of the fibers were investigated, and conclusions are drawn regarding their structural inhomogeneity. The microheterogeneity of lead, cadmium, borosilicate, soda-silica and glasses is also characteristic of their fibers, and manifests itself particularly after their thermal treatment at 100 — 500C. Orig. art. has: 4 figures and 1 table.

SUB CODE: 11 / SUBM DATE: 22May65 / ORIG REF: 001 / OTH REF: 002

Card

2/2

CHERNYAK, M.G.; ASLANOVA, M.S.; VOL'SKAYA, S.Z.; KUTUKOV, S.S.;
SIMAKOV, D.P.; HAYDUS, G.G.; BOVKUNENKO, A.N.; KOVALEV, N.N.;
SHKOL'NIKOV, Ya.A.; ZHIVOV, L.G.; KOVALEV, N.P.; KOZHUKHOVA,
N.V.; KOROLEVA, A.Ye.; VINOGRADOVA, A.M.; OSIPOVA, O.M.;
BADALOVA, E.I.; BRONSHTEYN, Z.I.; L'VOV, B.S.; KRYUCHKOV,
N.N.; BLOKH, K.I.; MASHINSKAYA, N.I., red.

[Continuous filament glass fibers; technology fundamentals
and their properties] Nepreryvnoe stekliannoe volokno; osnovy
tekhnologii i svoistva. Moskva, Khimiya, 1965. 319 p.
(MIRA 18:8)

ASLANOVA, M. S.; VOLSKAYA, S. Z.

"Strength and structure of fibres made of borate, cadmium and lead glasses."

report submitted for 4th All-Union Conf on Structure of Glass, Leningrad,
16-21 Mar 64.

VOL'SKAYA, V. M.

Cand. Med. Sci.

Dissertation: "Collateral Blood Circulation of the Shank in the Case of
Ligation of the Artery under the knee and shank vessels."

22/5/50

First Moscow Order of Lenin Medical Inst.

SO Vecheryaya Moskva
Sum 71

VOL'SKAYA, V.M., kand. med. na.

primary multiple cancer of the stomach. Zhirurgiya 40 n. 2:42-45
Ag 164. (JPRS 14:3)

1. Poliklinicheskoye otdeleniye (zav. - kand. med. nauk V.P. Komidov)
Onkologicheskogo instituta imeni P.A. Gertsena (dir. - prof. A.N.
Novikov), Moskva.

1. VOL'SKAYA, V. M.
2. USSR (600)
4. Arteries - Ligature
7. Anatomical basis for the level of ligation of the popliteal artery and of leg vessels. Arkh. anat. gist. i embr. 30, No. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

APPROVED FOR RELEASE: 08/09/2001

CIA-RDP86-00513R001860720018-8"

Ferromagnetic phases in the products of nickel ferricyanide
thermal decomposition. Zhur. neorg. khim. 10 no. 12:2595-2607
D '65. (1965 19:1)

1. Universitet imeni I. Mitskevicha, laboratoriya magnitokhimiya,
Poznan', Pol'sha.

VOL'SKI, V. [Wolski, W.]; POLITAN'SKA, U. [Politanaka, U.]

Ferromagnetic properties of a product obtained by boiling
nickel hydroxide with and iron. Zhur.prikl.khim. 38
no.3:667-668 Mr '65. (MIRA 18:11)

1. laboratoriya magnitokhimii universiteta imeni Adama
Mitskovicha, Poznan'. Submitted June 29, 1964.

VOL'SKII, G. I.

"A Study of the Fascioliasis Foci in the Former Klaypedskaya and Shaulyayskaya Oblasts of the Lithuanian SSR. " Cand Vet Sci, Inst of Biology, Acad Sci Lithuanian SSR, Vil'nyus, 1953. (RZhBiol, No 3, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

SPINU, I.; MARCOVICI, M.; CALOMFIRESCO, AL.; VOLSKI, V.

Study of antipoliomyelitis vaccination with live virus in the city of Bucharest. Arch. roum. path. exp. microbiol. 21 no.1:15-18 Mr '62.

1. Travail de l'Institut "Dr. I. Cantacuzino" — Service de la Poliomyélite.

(POLIOVIRUS VACCINE, ORAL)

VOL'SKIY, A., inzh.

New materials and products. Stroitel' no.1:23-24 Ja '59.

(MIRA 12:3)

(Building materials)

VOL'SKIY, A., inzhener.

Simple method for heating open pits in winter. Stroitel'
no.12:19 D '56.

(MLRA 10:2)

(Clay) (Heating)

VOL'SKIY, A.G.; LEGOSTAYEV, G.S.; ROMANNIKOV, F., red.

[Fire springs] Ognennyye rodniki. Lipetsk, Lipetskoe
knizhnoe izd-vo, 1963. 49 p. (MIRA 17:4)

YOLISKIY, Aleksandr Konstantinovich; ALEKSANDROV, L.A., redaktor; TIKHONOVA,
Ye.A., tekhnicheskii redaktor

[Methods of water purification for seagoing vessels] Metody vodo-
podgotovki na morskikh sudakh. Moskva, Izd-vo "Morskoi transport,"
1956. 59 p. (MLRA 9:10)
(Feed-water purification)

STERLIN, Yakov Moiseyevich, kand. tekhn. nauk; VOL'SKIY, A.N., akademik,
red.; PANASENKOVA, Ye.I., red.; POPOVA, S.M., tekhn. red.

[Metallurgy of uranium] Metallurgiya urana. Pod obshchei red.
A.N.Vol'skogo. Moskva, Gosatomizdat, 1962. 418 p.

(MIRA 15:4)

(Uranium--Metallurgy)

AUTHORS: Vasilenko, B.D., Vol'skiy, A.N.

30V/78-3-7-6/44

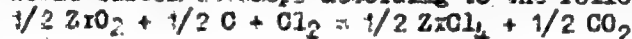
TITLE: The Thermodynamics of the Chlorination Reactions of Zirconium Dioxide With Gaseous Chlorine (Termodinamika reaktsiy khlorirovaniya dyuoksidi tsirkoniya gazoobraznym khlorom)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 7, pp 1497-1504 (USSR)

ABSTRACT: On the basis of a thermodynamic analysis the chlorination reaction of zirconium dioxide with gaseous chlorine was investigated with the following results: Chlorination of zirconium dioxide develops very unfavorable even at high temperatures (1000-1500°C). At temperatures of 500-1000°C the reaction products in a mixture of zirconium dioxide with solid carbon are not in equilibrium with chlorine even in the case of a chlorine concentration of 10⁻⁷ vol%.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001860720018-8

of solid carbon develops according to the following equation:



Card 1/2

At temperatures above 700°C chlorination develops mainly according to the following equation: $1/2 \text{ZrO}_2 + \text{C} + \text{Cl}_2 = 1/2 \text{ZrCl}_4 + \text{CO}$.

The Thermodynamics of the Chlorination Reactions of Zirconium Dioxide With Gaseous Chlorine

SOV/ 78-3-7-6/44

At temperatures of 1000°C chlorination of zirconium oxide develops entirely in accordance with the second-mentioned equation. In the chlorination of zirconium oxide with solid carbon $ZrCl_4$, Cl_2 , CO_2 and CO exist in the gaseous phase. Besides, also phosgene ($COCl_2$) occurs in the gaseous phase. There are 2 figures, 10 tables, and 7 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy Institut tsvetnykh metallov i zolota im. M.I.Kalinina (Moscow Institute of Nonferrous Metals and Gold imeni M.I.Kalinin)

SUBMITTED: June 8, 1957

1. Zirconium dioxide--Analysis
2. Zirconium dioxide--Chlorination
3. Chlorine--Thermochemistry
4. Temperature--Effectiveness

Card 2/2

SOV/137-58-8-16720

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 70 (USSR)

AUTHORS: Vasilenko, B.D., Vol'skiy, A.N.

TITLE: Chlorination of Zirconium Dioxide by Gaseous Chlorine in the Presence of Solid Carbon (K voprosu o khlorirovanii dnuokisi tsirkoniya gazoobraznym khlorom v prisutstvii tverdogo ugle-roda)

PERIODICAL: Sb. nauchn. t-r. Mosk. in-t tsvetn. met. i zolota, 1957, Nr 27, pp 119-135

ABSTRACT: A study is made of the relationship between the rate of chlorination of briquets of a mixture of ZrO_2 and soot on the one hand and a series of factors and the composition of the gas phase in chlorination on the other. It is established that in this process the C may oxidize to CO_2 or to CO, the latter of which acts to reduce the ZrO_2 . The rate of chlorination in the presence of CO is almost fifty per cent less than with solid C at the same Cl_2 consumption. When the briquets are chlorinated with solid C, the CO/ CO_2 ratio in the gas phase rises with increasing temperature, attaining a value of 5 at $1000^\circ C$ and a ZrO_2 :C molecular ratio of 1:2. Three regions of dependence

Card 1/2

SOV/137-58-8-16720

Chlorination of Zirconium Dioxide by Gaseous Chlorine (cont.)

of chlorination rate upon temperature are noted: A kinetic interval up to 520° , an intermediate from 520 to 700° , and a diffusive at $> 700^{\circ}$. Mathematical expressions for the relationship between the chlorination rate and the partial pressure of the Cl_2 and the rate of flow of the Cl_2 are presented. The temperature of the chlorination process is 700° .

L.P.

1. Zirconium oxide—Chlorination
2. Chlorine—Chemical reactions
3. Carbon—Applications

Card 2/2

Application of Waelz process to Karabash (Russia) copper-zinc ores and mixed concentrates. A. N. Vol'skiy, R. A. Agnashova and N. G. Semakova. Izvest. Akad. Nauk SSSR, 1977, 221-26. The applicability of the Waelz process to the ores of the Karabash district was investigated. The complex ores contain sphalerite, chalcopyrite, tennantite, pyrite and other minerals, the av. analysis being: Cu 3-4%, Zn 3-5%, Pb 0.2-0.5%, As 0.2-0.5%, Fe 31-40%, Au 13-16 g per ton, Ag 1.2-1.9 g per ton and S 41-46%. Because of the low Zn content of the ores the direct application of the Waelz process was not justified, and, therefore, the concentration of these ores was investigated with the aim of producing a Cu-Zn concentrate, since the selective flotation did not give satisfactory results. The av. metal content of the concentrates was: Cu 12-15%, Zn 20-25%, Pb 0.7-2.8%, As 0.7-2.2%, Fe 20-30%, Au 6-11 g per ton, Ag 4 g per ton, and S 45-48%. The recovery in flotation was Cu and Zn 40-50%, Au and Ag 70-80%. Expts. showed that volatilization of Zn takes place on heating in a reducing atm. both with roasted and non roasted concentrates. With unroasted concentrates erosion of furnace walls was considerable, and the Zn volatilization was not as good as with roasted ores. In the com. application of the Waelz process the volatilization of not less than 85% of Zn is expected. The Zn oxide contains some Pb and As, although most of the As (85%) is volatilized in roasting. The furnace temp. need not be above 1100°. The residue obtained from treating roasted concentrates consists mainly of metallic Cu (16-20%), and Fe and its oxides, mainly magnetic (total Fe 37-44%). The Fe oxides can be reduced, and the product consisting almost entirely of Cu and Fe may be obtained. By remelting, this product can be split into Cu, contg. some Fe, and cupiferous Fe. The residue may also be treated together with Cu mats in a converter, or can be smelted together with Cu concentrates. The coal consumption is about 40% of the weight of the roasted concentrate.

Anton Nikolayevich Vol'skiy - (b. 1917)

Smelting of Ural copper-zinc concentrates in the form of
briquets. A. N. Volokit and R. A. Agracheva. *Tsitianie
Met.* 1933, No. 4, 68-72.—Expts. were made to det. the
feasibility of economic extrn. of both Cu and Zn by smelting
the Cu-Zn concentrates without selective flotation. The
concentrates contained Cu 12, Zn 9.36 and Fe 31.11%.
Two methods were used to obtain (1) mat, slag and Zn
oxide and (2) metallic Cu, slag and Zn oxide. By the use
of the first method 92-9% of Zn and 98-8% of Cu were
recovered. The second method gave 90-2% recovery of
Zn and 98-8.5% of Cu. The consumption of coal was 15-
20% of the charge in the first method and 15% in the
second. Smelting of concentrates agglomerated with coal
gave less satisfactory results, which, however, can be
improved by blowing pulverized coal into the molten slag.
B. N. Daniloff

ASB 514 METALLURGICAL LITERATURE CLASSIFICATION

Physicochemical conditions in the application of oxygen-enriched air to nonferrous metallurgy. A. N. Yulish. *Tsvetnaya Metal.* 1934, No. 4, 61-6. —A review of the problem of application of O-enriched air to nonferrous metals in the following processes: production of Cu mat, roasting of sulfide ores, bismuthization, reduction with C in a blast furnace, fuel combustion and hydrometallurgical processes. S. L. Markovskiy

AS 514 METALLURGICAL LITERATURE CLASSIFICATION

ca

A study of chemical equilibria in melts (mat and slag).
A. N. Vol'skil and P. A. Akrachova. *Tsvetnaya Metall.*
1933, No. 7, 92-114.—1. Dissociation pressure of sulfides
in molten slags.—On the basis of theoretical analysis of
equil. between mat and slag the authors show the impor-
tance for theoretical metallurgy of detn. of the relation
between the disson. pressures of sulfides and oxides and
their concns. in their melts. Runtl. methods developed
for detg. disson. pressures of sulfides are described in
detail. The relation between the disson. pressures of
As₂S₃ and FeS and their concns. in their solns. (molten)
in Cu₂S were detd. The disson. pressures of sulfides are
considerably lowered as their concns. in the melt decrease.
The mass action const. for the reaction of disson. of sul-
fides in melts does not remain const., but is a function of
the concn. of these sulfides in the melt, and is decreased as the
concns. of these sulfides decreases. 2. Dissociation pressures of oxides
dissolved in molten slags.—The relation between disson.
pressure of FeO and its concn. in molten slags was detd.

9

With decreasing concn. of oxide of a given metal in molten
slag the equil. concn. of CO₂ in the mixt. of CO and CO₂
decreases. When oxides of 2 metals of different affinities
for O are pre-ent in slags, different concns. of these oxides
are required to produce equal disson. pressures. The
concns. is greater for the metal of greater affinity for O.
When this condition of equal disson. pressures is realized
both metals will be reduced simultaneously. This ex-
plains, for example, the reduction of Fe in the reduction
smelting of Cu, Pb, Ni and Sn ores, in spite of the fact

that certain amts. of Cu, Pb, Ni and Sn remain unreduced,
although these metals possess lower affinity for O than the
Fe.
B. N. Daniloff

CR

Dissociation pressure of oxides and theory of oxidizing, refining of metals. A. N. Volkov and Ya. Ya. Sholushko. *Tsvetnye Met.* 1936, No. 1, 102-110. The dissociation pressure of oxides of several metals in relation to their concentration in molten alloys were investigated. All reagents used in the experiments were specially prepared and purified. Special apparatus was built which permitted attaining the equilibrium conditions between the metals and oxides from both sides, i.e., by utilizing the pure molten metals.

has not hitherto been observed metallurgically, because the ratios CuO/Cu and the dissociation pressure of Cu_2O in solid, do not attain the magnitudes of free Cu_2O when the concentration of Cu_2O exceeds 4.5% by wt. The activity of the equilibrium constant for the reaction $\text{Cu} + \text{O}_2 \rightleftharpoons \text{Cu}_2\text{O}$ was determined at 1100°C. II. Determination of dissociation pressure of oxide of solute metal in relation to its concentration in the melt. (a). FeO in Cu-Fe melts. Melts were prepared with Fe content varying from 0.81 to 12.84 weight %. Fe was prepared by treating pyrophoric Fe with H_2 and the prepared metal was melted in the melt. The dissociation pressure of FeO was determined at 1100°C. The dissociation pressure of FeO in Cu-Fe melts was found to be lower than in the melt of pure FeO .

9

CA

Utilization of slags from secondary melting of aluminum.
 G. A. Boshkov, A. N. Vol'skiy, I. I. Guldin, and I. N.
 Puzosantsev. U.S.S.R. 64,346, Feb. 28, 1966. For
 each ton of Al waste remelted in reverberatory furnace
 there are used NaCl 200, KCl 200, fluorspar 75, and cryolite
 25 kg. The slag traps 15-20% of its wt. of Al. To
 recover it, the slag is crushed coarsely and the larger Al
 inclusions are picked out by hand. The slag is then
 passed through a Blake crusher to 15-mm. size, and
 screened, and again Al is picked out. The crushed slag is
 leached by passing it countercurrent to H₂O. The insol.
 residue is dried and screened. The particles above 40
 mesh contain 40% of the metal; this fraction is returned to
 the furnace. The fraction below 40 mesh is discarded.
 The leachate is concd. by means of furnace waste gases
 and crystal. mass is used as flux in the reverberatory
 furnace. M. Hosh

ASB-11A METALLURGICAL LITERATURE CLASSIFICATION

VOLSKIY, N. I.

TECHNOLOGY.

(Machineability of materials by grinding). Leningrad. Gos. nauchno-tekh,
izd-vo mashinostroit. lit-ry, 1950.

9. Monthly List of Russian Accessions, Library of Congress, July 195~~1~~² Uncl.

VOLSKIY, N. I.

VOLSKIY, N. I. -- "MACHINING OF METALS BY POLISHING." SUB 12 JUN 52, MOSCOW MACHINE-TOOL
AND TOOL INST (INSTIT I. V. STALIN (DISSERTATION FOR THE DEGREE OF DOCTOR IN TECHNICAL
SCIENCES)

SO: VECHERNAYA MOSKVA, JANUARY-DECEMBER 1952

85118

1.1100 only 2808

S/123/60/000/017/003/015
A005/A001

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1960, No. 17, p. 100.
92248

AUTHOR: Volskiy, N.I.

TITLE: On the Problem of Completeness of a Metal Layer Removal From an
Article at Cylindrical Grinding ✓

PERIODICAL: Tr. Leningr. tekhnol. in-ta im. Lensovet, 1959, No. 50, pp. 67-71

TEXT: The grinding performance can be evaluated by the coefficient ξ_1 characterizing the cutting completeness degree and representing the ratio of the total possible area of cutting from an article with the disk grains per time unit to the area of the article passed under the disk grains during the same time unit. The coefficient ξ_1 is expressed by the equation:

$$\xi_1 = \frac{B V_{\text{per}} 0.02 \sqrt[3]{K^2 P_{\text{scr}}}}{d_{\text{gr}}^2 \pi d_{\text{ar}} V_1}$$

Here are: B the width of the disk in mm; V_{per} the peripheral speed of the disk
Card 1/2

85118

S/123/60/000/017/003/016
A005/A001

On the Problem of Completeness of a Metal Layer Removal From an Article at Cylindrical Grinding

in mm/sec; k the percentage of grains in the disk; d_{gr} the grain diameter in mm, d_{ar} the article diameter in mm; V_l the lengthwise motion speed of the table in mm/sec; F_{scr} the scratch area of the grain on the article surface in mm². It follows from the formula that it is more advantageous for better cutting completeness of the metal layer to use a tool with finer grains and smaller cutting depth than with coarser grains and large cutting depth. The formulae are also given for determining F_{scr} . There is 1 figure. ✓

[Translator's note: Subscripts per (peripheral), gr (grain), ar (article), l (lengthwise), scr (scratch) are translations of the original Кр (krug), з (zerno), из (izdeliye) пр (prodel'nyy), у (tsarapina).]

B.I.M.

Translator's note: This is the full translation of the original Russian abstract.

Card 2/2

VOLSKIY, N. I.

Volskiy, N. I. -- "The Workability of Metals by Grinding." Min Higher Education USSR. Moscow Machine-Tool and Tool Inst imeni I. V. Stalin. Moscow, 1956. (Disseration For the Degree of Doctor in Technical Sciences).

So: Knizhnaya Letopis', No. 11, 1956, pp 103-114

G

35A-35B. Influence of Type of Grain and Binding Agent of the Abrasive Wheel on Grinding and Polishing of Metals. (In Russian.) N. I. Volskiy. Stanki i Instrument (Machine Tools and Instruments), v. 20, Feb. 1949, p. 18-20.

Relative merits of corundum and carborundum as metal abrasives. Differences between them are explained on the basis of type and size of grains and of varying characteristics of the bonding agents.

ASIA-51A METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

1ST AND 2ND CUTS

PROCESSING AND PROPERTIES INDEX

G

300-77. Grindability of Steels. (In Russian.) N. I. Volokh. *Stanki i Instrument (Tools and Instruments)*, v. 19, July 1948, p. 20-23.
Effects of factors such as composition, structure and heat treatment.

400-55A METALLURGICAL LITERATURE CLASSIFICATION

FROM SIMILAR

FROM SOURCE

OPERATIONS

FROM SOURCE

B

PROCESSING AND PROPERTIES DATA

5

Grindability of Steels. (In Russian.) N. I. Volzhil.
Stanki i Instrumenty (Tools and Instruments), v. 10,
July 1948, p. 20-28.

Effects of factors such as composition, structure,
heat treatment, etc., on the above were investi-
gated. Results are graphed and illustrated.

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION
SECTION SYMBOLS
SUBGROUPS OF THE GROUPS

AUTHOR INDEX
CROSS REFERENCE TO OTHER SECTIONS

5

Machining & Machinability

Machining a Steel by Grinding. N. I. Volpik. (*Stanki i Instrument*, 1948, No. 7, 20-22). [In Russian]. Experiments on the grinding of 16 types of steel with corundum wheels are reported. It was found that: (1) increasing the carbon content of pearlite steels leads to better grinding; (2) addition of chromium and nickel to low-alloy structural steel lowers productivity by increased toughness; (3) absence of oxidation of grindings in the case of austenitic steel lowers the productivity; and (4) structure can be arranged in the following order of increasing grinding efficiency: Austenite, martensite, troostite, sorbite and pearlite.—S. S.

S

Machining

Effect of the Nature of the Grain and Disc Band During the Machining of Metals by Grinding. N. I. Volzhin. (*Sovetskii Instrument*, 1949, No. 2, 18-20). (In Russian). Experiments are described on the grinding of tempered and normalized specimens of steel and cast iron. The performances of the cerium and cerium-oxide wheels are compared, and the nature of disc wear and of its influence on grinding are discussed.—S. S.

26-LETTER ALPHABET: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

10-DIGIT: 1 2 3 4 5 6 7 8 9 0

1ST AND 2ND CROSS-REFERENCES

PROCESSING AND PROPERTIES INDEX

5

W. I. Volokh (Mosk. Indus. Univ., Moscow, U.S.S.R.) [Abstract] of paper, 1968, vol. 21, Nov., p. 13. The effect of heat treatment on composition, structure, and heat treatment properties.

ASB-5LA METALLURGICAL LITERATURE CLASSIFICATION

FROM STANFORD

FROM BOSTON

CROSS-REFERENCES INDEX

270

Effect of the Nature of the Grain and Die Bond During the Grinding of Steels by Grinding. N. I. Volkhin. (Ninth International Conference, 1948, No. 2, 18-20). (In Russian). Experiments are described on the grinding of tempered and normal-tempered steels and cast iron. The performance of hard and soft grinding wheels are compared, and the conditions and characteristics of the grinding are discussed. The nature of the wear and of its influence on grinding are discussed.—S. R.

ASB-11.6 METALLURGICAL LITERATURE CLASSIFICATION

Machineing a Steel by Grinding. N. I. Volzhin. (*Sovetskii Instrument*, 1946, No. 7, 20-23). [The Russian]. Experiments on the grinding of 18 types of steel with corundum discs are reported. It was found that: (1) increasing the surface contents of pearlitic steels leads to better grinding; (2) addition of chromium and nickel to low-alloy structural steel lowers productivity by increased toughness; (3) absence of oxidation of grindings in the case of austenitic steel lowers the productivity; and (4) structures can be arranged in the following order of increasing grinding efficiency: Austenitic, martensitic, ferritic, sorbitic and pearlitic.—A. S.

VOLSKIY, N. L.

PA 37/49T99

USSR/Metals
Steel - Properties
Polishing

Jul 48

"The Processability of Steel Through Polishing,"
N. L. Volskiy, Cand Tech Sci, 3 1/2 PP

"Stanki i Instrument" No 7

Presents results of experiments to ascertain the influence of chemical composition, structure, and mechanical properties of steel on its behavior when being ground. Includes fourteen sketches.

FDB

37/49T99

GZHITSKIY, S.Z. [Hzyts'kyi, S.Z.]; VOL'SKIY, N.N. [Vol's'kyi, M.M.]

Effect of insulin on phosphate excretion by the "little
rumen" wall in cattle. Dop. AN URSR no.8:1092-1094 '64.
(MIRA 17:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut fiziologii i
biokhimi i sel'skokhozyaystvennykh zhivotnykh. 2. Chlen-
korrespondent AN UkrSSR (for Gzhitskiy).

VOL'SKIY, P.M.

VOL'SKIY, P.M.

Rare case of giant chorio-epithelioma of the fallopian tube. Sov.
med. 21 Supplement:17 '57. (MIRA 11:2)

1. In ginekologicheskogo otdeleniya 2-y gorodskoy bol'nitsy
Nizhnego Tagila.
(FALLOPIAN TUBES--CANCER)

VOL'SKIY, P.Ya., inzh., ved. red.

[Devices and apparatus for biological examinations and medical diagnosis] Pribory i apparatura dlia biologicheskikh issledovaniy i meditsinskoj diagnostiki. Moskva, GOSINTI, 1962. 2 v. (Peredovoi nauchno-tehnicheskii opyt, no.2, no.4) (MIRA 18:2)

BADOMATNIKOV, N., mekhanik shakhty (Sverdlovskaya oblast', Yegorshinskiy rayon, poselok Bulanash); NEPECHIY, P.; VOL'SKIY, S.

Readers' letters. Izobr.i rats. no.1:60-61 Ja '60.
(MIRA 13:4)

1. Nachal'nik byuro sodeystviya ratsionalizatsii i izobretatel'stvu zavoda "Dneprospetsstal" (for Nepechiy). 2. Sekretar' zavodskogo soveta Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov zavoda "Dneprospetsstal" (for Vol'skiy).
(Technological innovations)

VOL'SKIY, S

VOL'SKIY, S., dots.

~~Traditions of revolutionary combat in sailors of the Black Sea~~
fleet. Mor.flot 17 no.10:1-7 0 '57. (MIRA 10:12)

1.Odesskiy issledovatel'skiy institut morskogo flota [OIIMF]
(for Bagerman).

(Merchant marine)

VOL'SKIY, S. (Eng.)

Writes about a new method of bending copper tubing with the aid of a wire spiral.

Soviet Source: P: Avtomobil', No. 6; Moskva; June 1950

Abstracted in USAF "Treasure Island" on file in Library of Congress, Air Information Division, report no. 100876, Unclassified.

Vol'skiy, S.A.

KLIMOV, N.I., inzhener; VOL'SKIY, S.A., inzhener

Mechanization of lining removal in electric arc furnaces. Stal'
15 no.9:807-810 S'55. (MLRA 8:12)

1. Zavod "Dneprospetsstal"
(Electrometallurgy--Equipment and supplies)

VOL'SKIY, S., dotsent, kand. istoricheskikh nauk; SHTERNSHTEYN, Ya., dotsent,
kand. istoricheskikh nauk

Merchant seamen of the Black Sea in the Great Patriotic War. Mor.
flot 25 no.5:3-5 My '65. (MIRA 18:5)

NEPECHIIY, P.D.; VOL'SKIY, S.A.

Forging manipulator "maliutka" for air and steam forging hammers.
Kuz.-shtam. proizvod. 5 no.12:34-38 D '63. (MIRA 17:1)

VOL'SKIY, S.A., inzh.; NEPECHIIY, P.D., inzh.

Mechanized limestone feed in skip hoists. Mekh. 1 avtom.
proizv. 18 no.6:20 Je '64. (MIRA 17:9)

NEPECHYI, P.D.; VOL'SKIY, S.A.

Universal nut wrench. Mashinostroitel' no.3:24 Mr '61. (MIRA 14:3)
(Wrenches)

NEPECHIIY, P.D.; VOL'SKIY, S.A.

Stationary machine for metal cleaning after forging and rolling.
Kuz.-shtam. proizv. 2 no.11:48 N '60. (MIRA 13:16)
(Metal cleaning)

NEPECHIN, P.D.; VOL'SKIY, S.A.

New manipulator mechanism. Metallurg 5 no.8:23-24
Ag '60. (MIRA 13:7)

1. Zavod "Dnepropetstal'."
(Rolling mills--Equipment and supplies)